DOCUMENT RESUME

ED 198 758 HE 013 500

AUTHOR McLean, James E.
TITLE Evaluation of the Monterrey Tech Staff Development Program in Mexico City, 1979-80.
PUB DATE [80]
NOTE 20p.; Appended NCS Student Survey may not reproduce well.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Administrator Attitudes; *Administrator Education; Administrators; College Faculty; *Course Evaluation; Educational Environment; Educational Facilities; Education Majors; *Faculty Development; Faculty Evaluation; Higher Education; Institutional Research; *Intercollegiate Cooperation; *Masters Degrees; Pretests Posttests; Program Evaluation; Student Evaluation; Teacher Attitudes; Work Attitudes; Writing Skills
IDENTIFIERS *Monterrey Institute of Technology (Mexico); University of Alabama

ABSTRACT

Courses, instruction, arrangements, and student outcomes of the Monterrey Tech Staff Development Program were evaluated. The program was designed to assist faculty and administrators of the Monterrey Institute of Technology strengthen their qualifications through a master's degree program in education offered in Mexico City by regular members of the University of Alabama faculty. Each course and its instructor were assessed using the NCS Student Survey of Course/Instructor, which is appended. Additional questions regarding students' perceptions of their own efforts and the physical arrangements made for the course were added to the instrument. Student outcomes were examined in terms of achievement, written expression in English, and attitudes about their jobs. Pre- and post-testing of student achievement were undertaken using items submitted by the course instructors, while written expression in English was assessed using pre- and post-course writing samples. A semantic differential instrument, which is appended, was used to evaluate student job attitudes. Additionally, Alabama professors were asked to complete a short questionnaire, which is appended, concerning travel arrangements, housing, local transportation, and course arrangements. Results indicate that instructors and administrators participating in the master's degree program significantly improved in the areas of achievement, written expression in English, and attitude. The courses and instructors were rated good to very good by the students. The arrangements for travel and the courses seemed to be more than adequate. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED198758

HE

EVALUATION OF THE MONTERREY TECH STAFF DEVELOPMENT PROGRAM IN MEXICO CITY 1979-80

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

James E. McLean

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

James E. McLean

Evaluator

HE 013 800

Evaluation of the Monterrey Tech Staff

Development Program in Mexico City

1979-80

The purpose of the Monterrey Tech Staff Development Program was to assist the Monterrey Tech faculty and administrators strengthen their educational qualifications. This was accomplished by offering selected Monterrey Tech faculty and administrators a master's degree program in education in Mexico City by regular members of The University of Alabama faculty.

Personnel at Monterrey Tech could choose between two emphases in their master's degree programs. These were administration or instruction. Table 1 provides a list of the courses offered, their instructors, and the dates. All courses were taught in English and students were expected to complete a comprehensive examination on the subject matter given in English.

Twenty-five students were scheduled to start the program. Records indicate that 23 registered for the first course, and 21 students earned their master's degrees.

The remainder of this report provides a comprehensive evaluation of this effort. Evaluation of the courses, the instruction, the arrangements, and student outcomes are addressed in the report.

Method

The objective of the evaluation was to assess the courses and instruction as well as student outcomes. Further, the logistics of offering an entire master's degree program in Mexico City is addressed.

FEB 16 1981

Table 1

Course Offerings in Monterrey Tech Program

Core Courses (Taken by both Instructors and Administrators)		Instructor	Dates
AAP 590	Research Methods	Peseau	June, 1979
AHE 660	Curriculum Development	Peseau	June, 1979
AHE 640	Admin. of Higher Education	Duncan	July, 1979
AHE 620	Student in Higher Education	Duncan	July, 1979
Courses for Administrators Only			
AAP 650	Educational Planning I	Essex	Oct., 1979
AHE 630	Law in Higher Education	Mexican Natl.	March, 1980
AHE 641	Personnel in Higher Education	Duncan	June, 1980
AHE 645	Institutional Analysis	Sutton	July, 1980
AHE 655	Finance of Higher Education	Duncan	June, 1980
AHE 691	Clinical Experience	Sutton	July, 1980
Courses for Instructors Only			
BEP 563	Contr. of Psych. to Teaching	Joslin	April, 1980
AHE 599	Clinical Internship	Anderson	July, 1980
AHE 665	College Instruction	Vandermeer	June, 1980
AHE 670	Measurement and Evaluation	Vandermeer	June, 1980
ASC 603	Adv. Study in Curriculum Impr.	Rockarts	Nov., 1979
ASC 572	Classroom Observation	Anderson	July, 1980

Course Evaluation

Each course and its instructor was assessed using the NCS Student Survey of Course/Instructor (see Attachment A). The instrument has 27 questions which the students answer about the course and instructor. Three additional questions were added (see Attachment B). These questions were designed to solicit the students' perceptions of their own efforts and the physical arrangements made for the course.

Student Outcomes

Three types of student outcomes were examined. These were student achievement, written expression in English, and attitudes about their jobs.

Student achievement. The assessment of student achievement was based upon student performance on a pretest and posttest developed for that purpose. The tests were predominantly of the multiple-choice variety, but did include some matching type exercises. Separate tests were given to administrators and instructors.

The tests were developed from items submitted by the course instructors. Each instructor was asked to submit 20 multiple-choice items for each course they would teach based upon their course objectives. The evaluators reviewed these items for technical adequacy and chose 10 from each course for the tests. The instructor's test had 90 items while the administrator's test had 80. There were no questions from the clinical courses or from the law course taught by a Mexican national. The tests were then reviewed by the instructors in the program for content validity. The small number of participants in the program made an assessment of reliability difficult; however, conservative estimates of the reliabilities using approximation procedures (Hills, 1976) were .63 and .67 respectively for the instructor's and administrator's test.

Written expression in English. This aspect of student achievement was evaluated through the assessment of pre and post writing samples collected from the students in the program. A set of instructions for collecting these writing samples were provided for the professors (example of instructions for collecting posttest writing samples can be found in Attachment C).

The pre and post writing samples were paired, labeled "A" and "B" irrespective of which was pre or post, and evaluated on four bases to determine

which was better in each set according to general Standard Written English characteristics. The four bases of evaluation were:

1. Holistic Reading. According to formulae developed by such researchers as Paul Diederich, Lee Odell, and Charles Cooper, this is an evaluation based upon impression of organization, coherence, effective support/development of thesis or response to question, and general readability.

2. Manuscript error count per 100-word passage. Based upon the standard conventions of printed English given in a variety of handbooks and style manuals, this evaluation was to detect relative improvement in correct use of such conventions as idiomatic usage, punctuation, spelling, subject-verb and pronoun-referent agreement, avoiding fragment sentences, garbles, run-ons, and the like. A particular eye was kept for second-language interference in the form of lexical and syntactical elements.

3. Count for number of words per T-unit per 100-word passage. This evaluation was a check for growth or improvement in syntactic maturity (ability to generate more complex sentence structures) using the T-unit measure developed by Kellogg Hunt. The T-unit, which consists of any independent clause with all of its modifying words or structures, is an efficient reflector of sentence complexity.

4. Composite impression based upon summary of results from 1-3 above. In all but one case, results from evaluations 1-3 above were not uniform, necessitating composite evaluation to determine which essay was the better. (Voss, 1980, p. 1)

The pre to post changes were compared using standard statistical procedures (i.e., paired t-tests and chi square analysis).

Student attitudes about their jobs. The attitudes students held about their jobs were assessed on a pre and post basis using a semantic differential (see Attachment D for instrument). The 12 bipolar adjectives in the semantic differential were chosen from among those representing the "evaluative scale" in Osgood's research (Osgood, Suci, & Tannenbaum, 1957). The stimulus was "My job" so that the students' attitudes about their jobs were being assessed. The pre to post change was analyzed using a paired t-test.

Additional Evaluation

Additional data were collected to assess logistical problems which might accompany the delivery of instruction approximately 1400 miles (2250 kilometers) from the campus. Each of the Alabama professors was asked to complete a short questionnaire (Attachment E). This questionnaire solicited their opinions regarding travel arrangements, housing, local transportation, and course arrangements. It also provided space for the course instructors to add any comments which they thought appropriate.

Results

The results are presented for the evaluation of the courses and instructors, student outcomes, and the logistics of teaching so far from campus. Both the data and an interpretation are presented.

Course Evaluation

The mean ratings of instruction on the NCS Student Survey of Course/ Instructor (Attachment A) ranged from 3.84 to 4.68 with a median rating of 4.27. The mean ratings are based on all of the 27 items which were scored on the basis of the following scale: 1 represents very poor, 2 represents poor, 3 represents satisfactory, 4 represents good, and 5 represents very good. Thus, all of the mean ratings were in the "good" to "very good" range.

Upon a closer inspection of the item responses, ratings of the instructors seemed to be related very highly to the ratings of the courses. Further, only the mean ratings of Items 19 (Your rating of assigned textbooks) and 21 (Your rating of supplementary readings) were the lowest and tended to be in the "satisfactory" category. This may be attributable to the fact that these texts and readings were in English to the displeasure of the students.

An analysis of the supplementary questions (Attachment B) indicated that for the most part, the students believed that they expended efforts ranging from very little in some courses to very much in others. Further, students felt that the course schedules were moderately convenient. The classroom and equipment were felt to be adequate for the most part.

Student Outcomes

The student outcomes are addressed with respect to the achievement levels of students, their improvements in written expression in English, and their attitudes about their jobs.

Student achievement. As noted previously, students in both the instructor's option and the administrator's option wrote comprehensive objective examinations at the beginning and end of the one and one-half year program. The results are noted in Table 2.

Table 2

Comparison of Pre and Post Achievement

		Pretest		Posttest			
Group	n	Mean	SD	Mean	SD	Gain	t
Instructor	9	43.4	6.97	69.8	8.80	26.4	7.23*
Administrator	12	41.6	10.08	59.5	4.40	17.9	5.51*

*Posttest significantly better than pretest beyond the .001 level.

As can be seen in Table 2, gains in achievement were made by both the instructors and administrators in terms of both statistical and practical significance. Gains were statistically significant beyond the .001 level for both groups. That is, the probability that real gains were made is at least 99.9% for both groups.

Practical significance can be seen in the fact that instructors' and administrators' average improvements were 26.3 and 17.9 points respectively. These represent improvements of 3.8 and 1.8 standard deviation for instructors and administrators respectively. Based on any rule of thumb for assessing practical significance, these changes are dramatic.

Written expression in English. Pre and post samples of written English were compared on the basis of holistic reading, error count, T-unit count, and composite impression. A comparison based upon the holistic scoring, error count, and T-unit count is presented in Table 3.

There was a significant reduction in errors from pre to post for both the instructors and administrators. Pre to post comparisons of the holistic impressions and T-unit counts did not indicate significant changes.

When the pre writing samples were compared with the the post writing samples on the basis of overall impressions, the post samples were rated better for 80% of the students. Thus, a great majority of the students improved their expression in written English.

Table 3

Comparison of Pre and Post Written Expression

Instructor						
		Pre		Post		
Basis	n	Mean	SD	Mean	SD	t
Holistic	6	2.2	.34	2.1	.37	-.70
Error Count	6	8.7	2.66	6.2	3.43	-4.04*
T-unit Count	6	212.5	39.45	218.3	78.80	.16
Administrator						
		Pre		Post		
Basis	n	Mean	SD	Mean	SD	t
Holistic	12	2.2	.49	2.1	.44	-1.34
Error Count	12	9.8	5.44	7.2	4.63	-2.23*
T-unit Count	12	218.4	58.83	222.2	85.63	.13

*Change significant at .05 level.

Several complications must be taken into account when interpreting these results. They are:

1. Each pre- and post- essay was actually comprised of two separate essays, making it necessary to rate each response separately in the holistic reading. Thus, essay "A" called for two separate holistic ratings (since two separate topics were being responded to), and essay "B" called for two separate holistic ratings. Holistic rating is generally more reliable when only one topic is treated.

2. Several students chose to respond in a enumerative, "outline" form (in some cases, this form was used on both pre- and post- essays). Although such form is efficient and probable indicates good organizational ability, holistic rating is generally intended for evaluating continuous prose, and is less reliable in other applications.

3. Most of the pre- and post- essays were dated, making it possible for the evaluator to know which essay was the post- essay. In most cases, the post- essay would naturally be expected to be the overall better essay. Such knowledge

> could have served to prejudice the evaluator. (However, there were at least two cases where despite this knowledge, the evaluator decided that the pre- essay was the better of the two.) (Voss, 1980, p. 2)

The general conclusions provided by the English specialist after his evaluation was:

> As the data presented previously show, most of the students in the Monterrey Tech Program improved their use of Standard Written English during their course of study. The preponderance of evidence is that the post- essays reflect better organization and support, fewer conventional manuscript errors, and greater syntactic maturity. The post- essays also show a keener perception and understanding of appropriate response to the topics. In many cases, the pre- essays contained more personal detail and more general response to the "mission" of the program, but the post- essays showed greater control of subject, illustration, and focus. (Voss, 1980, p. 2)

Student attitudes about jobs. A comparison of the students' attitudes about their jobs from the beginning to the end of the program was assessed using a semantic differential (Attachment D). The results are noted in Table 4.

Table 4

Comparison of Attitudes Pre and Post

		Pre		Post			
Group	n	Mean	SD	Mean	SD	Gain	t
Instructor	11	47.5	4.85	54.9	7.82	7.4	3.65*
Administrator	9	48.0	7.26	50.7	8.22	2.7	1.05

*Attitude improved at .01 level of significance.

Although the attitudes of both instructors and administrators improved, only the attitudes of the instructors improved significantly. However, in that a score of 48 on the semantic differential represents a neutral attitude,

attitudes of both instructors and administrators were above the neutral point at the conclusion of the program.

Additional Evaluation

An additional evaluation of the logistics of operating the program in Mexico City was done by having the Alabama professors fill out questionnaires about their visits (Attachment E). The results are noted below.

Travel arrangements. The only problem noted in regard to travel arrangements was that an airline strike caused one professor to take an alternate route. Since this event was beyond the control of the program administrators and did not cause any undue hardship, the arrangements for travel must be considered excellent.

Housing. Several of the professors remarked that although the housing was adequate, the management of the apartment building was less than adequate. One professor went so far as to suggest that the Amberes Apartments never be used except as a last resort.

Local transportation. No problems were noted with local transportation. Most professors rode to and from the campus with their students. Not only did this provide them with transportation, but it helped them to get better acquainted with their students.

Course arrangements. For the most part, the course arrangements were considered exemplary. Particularly, compliments were paid to the Monterrey Tech clerical personnel for their assistance in copying class materials.

Other comments. Several possible problem areas were noted. Among these is that students from the Mexico City campus of Monterrey Tech often were expected to carry on with their regular duties while taking classes. This did not allow them, in some cases, to have adequate time for preparation.

Another possible problem area noted was that of the clinical internships. It was felt that the internship needed to be strengthened. Further, several professors indicated that some students had complained about the overlap of some of the courses.

Summary and Recommendations

The evaluation indicates that instructors and administrators participating in the master's degree program at Monterrey Tech provided by The University of Alabama significantly improved in the areas of achievement, written expression in English, and attitude. The courses and the instructors were rated good to very good by the students. Further, the arrangements for travel and the courses seemed to be more than adequate.

Even though the program was very successful, several recommendations for further improvement are offered. The first is to further improve the communication among the professors teaching the courses. In this way, possible overlap of courses can be reduced, information about students can be shared, and the professors can be more informed about what to expect when they go to Mexico City to teach.

Based on the evaluation, the only substantive area in urgent need of improvement, is the clinical internship. Information learned in this project needs to be brought to bear on the problem for the future.

The results of the evaluation support the conclusion that the master's degree programs at Monterrey Tech presented by University of Alabama faculty was very successful. Much of this success was due to the planning of the program, and the cooperation between The University of Alabama and Monterrey Tech administrators.

References

Hills, J. R. Measurement and evaluation in the classroom. Columbus, Ohio: Charles E. Merrill Publishing Company, 1976.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. The measurement of meaning. Urbana, Illinois: University of Illinois Press, 1957.

Voss, R. F. Monterrey Tech Program: Standard written English proficiency evaluation. September, 1980.

ATTACHMENTS

ATTACHMENT A

NCS STUDENT SURVEY of COURSE/INSTRUCTOR

DIRECTIONS FOR MARKING ANSWER SHEET

- Use a No. 2 black lead pencil. Do NOT use ink or ball point pen.
- Make each mark heavy and black. Mark should fill circle completely.
- Erase clearly any answer you wish to change. Make no stray marks.

IMPROPER ✓ ⊗ ◐

PROPER ● ● ●

DIRECTIONS

Please rate the instructor of this course according to the following scale:

- 1 = Very Poor (VP)
- 2 = Poor (P)
- 3 = Satisfactory (S)
- 4 = Good (G)
- 5 = Very Good (VG)
- Not appropriate (NA)

CLASSROOM NO. A B C D E F G H I J

DO NOT MARK HERE

	VP	P	S	G	VG	NA
1. Ability to make the course relevant to the concerns of the students	○	○	○	○	○	○
2. Ability to answer students' questions	○	○	○	○	○	○
3. Respect for students' opinions	○	○	○	○	○	○
4. Willingness to talk with students outside of class	○	○	○	○	○	○
5. Knowledge of subject matter	○	○	○	○	○	○
6. Clarity of objectives and goals for the course	○	○	○	○	○	○
7. Encouragement of student participation	○	○	○	○	○	○
8. Presentation of course material (manner of speech, able to hear)	○	○	○	○	○	○
9. Clarity of criteria for determination of grades	○	○	○	○	○	○
10. Clarity of assignments for the course	○	○	○	○	○	○
11. Ability to help you learn basic assumptions in this field	○	○	○	○	○	○
12. Ability to encourage your seeking more information relevant to course	○	○	○	○	○	○
13. Ability to make class periods valuable	○	○	○	○	○	○
14. Willingness to change a position if evidence warrants doing so	○	○	○	○	○	○
15. Organization of the course	○	○	○	○	○	○
16. Response to requests for help from the students	○	○	○	○	○	○
17. Effectiveness in interpreting abstract ideas and theories	○	○	○	○	○	○
18. Ability to direct students to appropriate resources for answers	○	○	○	○	○	○
19. Your rating of the assigned textbooks	○	○	○	○	○	○
20. Your feeling toward the amount of assigned work for the course	○	○	○	○	○	○
21. Your rating of the supplementary readings	○	○	○	○	○	○
22. Your rating of the outside of class assignments and projects	○	○	○	○	○	○
23. Your rating of the class discussions	○	○	○	○	○	○
24. Your rating of the lectures	○	○	○	○	○	○
25. Your rating of the value of the course to you	○	○	○	○	○	○
26. Comprehensiveness of examinations in measuring what you learned	○	○	○	○	○	○
27. Performance of instructor in comparison with your other instructors	○	○	○	○	○	○

BACKGROUND INFORMATION

28. What is your current class level?
○ Freshman ○ Junior ○ Graduate Student
○ Sophomore ○ Senior ○ Other

29. What is your sex? ○ Male ○ Female

30. What grade do you expect to receive in this course?
○ A ○ C ○ Fail ○ No Credit ○ Do not know
○ B ○ D ○ Pass ○ Incomplete

31. What is your approximate cumulative grade-point average?
○ 3.50-4.00 ○ 2.00-2.49 ○ Less than 1.00
○ 3.00-3.49 ○ 1.50-1.99 ○ None yet-freshman or
○ 2.50-2.99 ○ 1.00-1.49 transfer student

Copyright © 1973 by National Computer Systems, Inc.

ADDITIONAL INSTRUCTOR QUESTIONS

Fill this in if the instructor has asked additional questions.

	A	B	C	D	E	F	G	H	I	J
1.	○	○	○	○	○	○	○	○	○	○
2.	○	○	○	○	○	○	○	○	○	○
3.	○	○	○	○	○	○	○	○	○	○
4.	○	○	○	○	○	○	○	○	○	○
5.	○	○	○	○	○	○	○	○	○	○
6.	○	○	○	○	○	○	○	○	○	○
7.	○	○	○	○	○	○	○	○	○	○
8.	○	○	○	○	○	○	○	○	○	○
9.	○	○	○	○	○	○	○	○	○	○
10.	○	○	○	○	○	○	○	○	○	○

NCS Trans-Optic T1844-543

ATTACHMENT B

Supplementary Questions for

NCS Student Survey of Course/Instructor

1. How would you characterize the effort you put forth in this course?

   A. Very little
   B. Less than average
   C. Average
   D. More than average
   E. Very much

2. The course schedule was:

   A. Inconvenient
   B. Moderately convenient
   C. Convenient

3. The classroom and equipment were:

   A. Inadequate
   B. Moderately adequate
   C. Adequate

ATTACHMENT C

INSTRUCTIONS FOR

COLLECTING POSTTEST WRITING SAMPLES

The purpose of collecting the writing samples is to assess the growth of the people in the Monterrey Tech Program in their facility with the English language and their understanding of the ITESM missions and purposes. Pretest samples were collected when they began their programs last summer.

Although the exercise is not timed, it should not take over an hour. Be sure everyone has plenty of paper before you begin. When everyone is ready, please read (or paraphrase if you wish) the following directions:

If you recall, last summer each of you wrote a paper on the missions and purposes of the ITESM. In order to assess your growth in the use of the English language and your further understanding of the missions and roles of the ITESM, we would like you to repeat the exercise. Please write a paper in English addressing the following two questions:

1. What do you believe are the missions and purposes of the ITESM in Mexico?

2. What do you believe are your roles and functions as they relate to the ITESM missions and functions?

You may take all of the time you wish and write as many pages as you think it takes to answer adequately the questions. When you finish, turn in your paper to me and take a break. I will call back when we are ready to continue.

Please write the two questions on the board so they can refer to them as they wish. You may wish to do this near the last hour of a period so they can go home afterwards. Do not let them take this assignment home. It must be done in class.

Attachment D

NAME _____

Below are pairs of descriptive adjectives. The purpose of this instrument is to judge your feelings about your job based on the following sets of adjectives. The results will be reported for all responses combined. Your responses will be kept anonymous. Please mark each adjective pair using the following scale:

1. Your present position is very much related to the first adjective.

4. Your present position is midway between the two adjectives.

7. Your present position is very much related to the last adjective.

My job

Good	1	2	3	4	5	6	7	Bad
Incomplete	1	2	3	4	5	6	7	Complete
Pleasurable	1	2	3	4	5	6	7	Painful
Unsuccessful	1	2	3	4	5	6	7	Successful
Meaningful	1	2	3	4	5	6	7	Meaningless
Unimportant	1	2	3	4	5	6	7	Important
Congenial	1	2	3	4	5	6	7	Quarrelsome
Ignorant	1	2	3	4	5	6	7	Educated
Useless	1	2	3	4	5	6	7	Useful
Perfect	1	2	3	4	5	6	7	Imperfect
Unwilling	1	2	3	4	5	6	7	Willing
Comfortable	1	2	3	4	5	6	7	Uncomfortable

ATTACHMENT E

Course Instructor's Questionnaire

Name _____

Course(s) _____ Date _____

Please give your opinion about the following items relevant to your teaching assignment in Mexico.

1. Travel arrangements:

2. Housing:

3. Local transportation:

4. Course arrangements (please include teaching facilities and equipment):

5. Any other comments: